

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

**CLAIM LISTING:**

1. (Original) A block polymer comprising.

at least one first block and at least one second block that are incompatible with each other and that have different glass transition temperatures (Tg), wherein the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block, and wherein the block polymer has a polydispersity index I of greater than 2.

2. (Original) The block polymer according to claim 1, wherein the at least one first block is chosen from:

- a) a block with a Tg of greater than or equal to 40°C,
- b) a block with a Tg of less than or equal to 20°C,
- c) a block with a Tg of between 20 and 40°C, and

the at least one second block is chosen from a block of category a), b) or c) that is different from the at least one first block.

3. (Original) The block polymer according to claim 1, wherein the at least one first block is totally or partially derived from at least one monomer wherein a homopolymer prepared from the at least one monomer has a Tg of greater than or equal to 40°C.

4. (Currently Amended) The block polymer according to claim 3, wherein the at least one monomer whose corresponding homopolymer has a Tg of greater than or equal to 40°C is chosen from the following monomers:

- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_1$

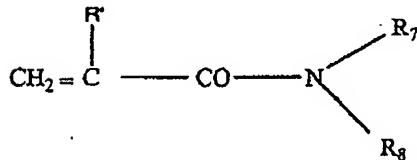
wherein  $\text{R}_1$  is chosen from linear and branched unsubstituted alkyl groups comprising from 1 to 4 carbon atoms, or  $\text{R}_1$  is chosen from a  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl group,

- acrylates of formula  $\text{CH}_2 = \text{CH-COOR}_2$

wherein  $\text{R}_2$  is chosen from a  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl groups, and a tert-butyl group:

and

- (meth)acrylamides of formula:



wherein  $\text{R}_7$  and  $\text{R}_8$ , which may be identical or different, each are chosen from a hydrogen atom and linear and branched alkyl groups comprising 1 to 12 carbon atoms; or  $\text{R}_7$  is H and  $\text{R}_8$  is a 1,1-dimethyl-3-oxobutyl group, and  $\text{R}'$  is chosen from H and methyl.

5. (Original) The block polymer according to claim 4, wherein the alkyl group comprising from 1 to 4 carbon atoms is chosen from methyl, ethyl, propyl, and isobutyl groups.

6. (Currently Amended) The block polymer according to claim 4, wherein the  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl group is chosen from isobornyl groupsacrylate and tert-butyl group.

7. (Original) The block polymer according to claim 4, wherein the alkyl group comprising 1 to 12 carbon atoms is chosen from an n-butyl, t-butyl, isopropyl, isoheptyl, isoocetyl, and isononyl group.

8. (Original) The block polymer according to claim 3, wherein the at least one monomer whose corresponding homopolymer has a Tg of greater than or equal to 40°C is chosen from methyl methacrylate, isobutyl methacrylate, and isobornyl (meth)acrylate.

9. (Original) The block polymer according to claim 2, wherein the at least one first block with a Tg of less than or equal to 20°C is totally or partially derived from at least one monomer wherein the homopolymer prepared from at least one monomer has a Tg of less than or equal to 20°C.

10. (Original) The block polymer according to claim 9, wherein the at least one monomer whose corresponding homopolymer has a Tg of less than or equal to 20°C is chosen from the following monomers:

- acrylates of formula  $\text{CH}_2 = \text{CHCOOR}_3$ ,

wherein  $R_3$  is chosen from linear and branched  $C_1$  to  $C_{12}$  unsubstituted alkyl groups, with the exception of the tert-butyl group, wherein at least one heteroatom chosen from O, N and S is optionally intercalated;

- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_4$ ,

wherein  $R_4$  is chosen from linear and branched  $C_6$  to  $C_{12}$  unsubstituted alkyl groups, wherein at least one heteroatom chosen from O, N and S is optionally intercalated;

- vinyl esters of formula  $R_5\text{-CO-O-CH} = \text{CH}_2$

wherein R<sub>5</sub> is chosen from linear and branched C<sub>4</sub> to C<sub>12</sub> alkyl groups;

- C<sub>4</sub> to C<sub>12</sub> alcohol and vinyl alcohol ethers; and
- N-(C<sub>4</sub> to C<sub>12</sub>)alkyl acrylamides.

11. (Original) The block polymer according to claim 10, wherein the N-(C<sub>4</sub> to C<sub>12</sub>)alkyl acrylamide is chosen from N-octylacrylamide.

12 (Original) The block polymer according to claim 9, wherein the at least one monomer whose corresponding homopolymer has a Tg of less than or equal to 20°C is chosen from alkyl acrylates whose alkyl chain comprises from 1 to 10 carbon atoms, with the exception of the tert-butyl group.

13. (Original) The block polymer according to claim 2, wherein the at least one first block with a Tg of between 20 and 40°C is totally or partially derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of between 20 and 40°C.

14. (Original) The block polymer according to claim 13, wherein the at least one first block with a Tg of between 20 and 40°C is totally or partially derived from at least one monomer wherein the corresponding homopolymer has a Tg of greater than or equal to 40°C and from at least one monomer wherein the corresponding homopolymer has a Tg of less than or equal to 20°C.

15. (Original) The block polymer according to claim 13, wherein the at least one first block with a Tg of between 20 and 40°C is totally or partially derived from at least one monomer chosen from methyl methacrylate, isobornyl acrylate, isobornyl methacrylate, trifluoroethyl methacrylate, butyl acrylate, and 2-ethylhexyl acrylate.

16. (Original) A block polymer comprising at least one first block and at least one second block that are incompatible with each other, the at least one first block having a glass transition temperature (Tg) of greater than or equal to 40°C, and the at least one second block having a glass transition temperature of less than or equal to 20°C, the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block and the block polymer having a polydispersity index I of greater than 2.

17. (Original) The block polymer according to claim 16, wherein the at least one first block is totally or partially derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of greater than or equal to 40°C.

18. (Original) The block polymer according to claim 16, wherein the at least one first block is a copolymer derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of greater than or equal to 40°C.

19. (Currently Amended) The block polymer according to claim 17, wherein the at least one monomer whose corresponding homopolymer has a Tg of greater than or equal to 40°C is chosen from:

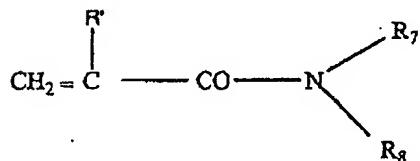
- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)-\text{COOR}_1$

wherein  $\text{R}_1$  is chosen from linear and branched unsubstituted alkyl groups comprising from 1 to 4 carbon atoms, or  $\text{R}_1$  is chosen from a  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl group,

- acrylates of formula  $\text{CH}_2 = \text{CH}-\text{COOR}_2$

wherein R<sub>2</sub> is [[a]] chosen from C<sub>4</sub> to C<sub>12</sub> cycloalkyl groups, and a tert-butyl group;  
and

- (meth)acrylamides of formula:



wherein R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, each are chosen from a hydrogen atom and linear and branched alkyl groups comprising 1 to 12 carbon atoms; or R<sub>7</sub> is H and R<sub>8</sub> is a 1,1-dimethyl-3-oxobutyl group, and R' is chosen from H and methyl.

20. (Original) The block polymer according to claim 19, wherein the unsubstituted alkyl group comprising from 1 to 4 carbon atoms is chosen from methyl, ethyl, propyl, and isobutyl groups.

21. (Currently Amended) The block polymer according to claim 19, wherein the C<sub>4</sub> to C<sub>12</sub> cycloalkyl group is chosen from an isobornyl group ~~and a tert-butyl group~~.

22. (Original) The block polymer according to claim 19, wherein the alkyl group comprising 1 to 12 carbon atoms is chosen from n-butyl, t-butyl, isopropyl, isohexyl, isoctyl, and isononyl groups.

23. (Original) The block polymer according to claim 17, wherein the at least one monomer whose corresponding homopolymer has a Tg of greater than or equal to 40°C is chosen from methyl methacrylate, isobutyl methacrylate, and isobornyl (meth)acrylate.

24. (Original) The block polymer according to claim 16, wherein the at least one first block is present in an amount that ranges from 20% to 90% by weight relative to the total weight of the block polymer.

25. (Original) The block polymer according to claim 24, wherein the at least one first block is present in an amount that ranges from 30% to 80% by weight relative to the total weight of the block polymer.

26. (Original) The block polymer according to claim 24, wherein the at least one first block is present in an amount that ranges from 50% to 70% by weight relative to the total weight of the block polymer.

27. (Original) The block polymer according to claim 16, wherein the at least one second block is totally or partially derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of less than or equal to 20°C.

28. (Original) The block polymer according to claim 16, wherein the at least one second block is a homopolymer derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of less than or equal to 20°C.

29. (Original) The block polymer according to claim 27, wherein the at least one monomer is chosen from:

- acrylates of formula  $\text{CH}_2 = \text{CHCOOR}_3$ ,

wherein  $R_3$  is chosen from linear and branched  $C_1$  to  $C_{12}$  unsubstituted alkyl groups, with the exception of the tert-butyl group, wherein at least one heteroatom chosen from O, N and S is optionally intercalated;

- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_4$ ,

wherein  $\text{R}_4$  is chosen from linear and branched  $\text{C}_6$  to  $\text{C}_{12}$  unsubstituted alkyl groups, where at least one heteroatom chosen from O, N and S is optionally intercalated;

- vinyl esters of formula  $\text{R}_5\text{-CO-O-CH} = \text{CH}_2$

wherein  $\text{R}_5$  is chosen from linear and branched  $\text{C}_4$  to  $\text{C}_{12}$  alkyl groups;

-  $\text{C}_4$  to  $\text{C}_{12}$  alcohol and vinyl alcohol ethers; and

-  $\text{N}(\text{C}_4$  to  $\text{C}_{12})$ alkyl acrylamides.

30. (Original) The block polymer according to claim 29, wherein the  $\text{N}(\text{C}_4$  to  $\text{C}_{12})$ alkyl acrylamide is chosen from N-octylacrylamide.

31. (Original) The block polymer according to claim 27, wherein the at least one monomer whose corresponding homopolymer has a Tg of less than or equal to 20°C is chosen from alkyl acrylates whose alkyl chain comprises from 1 to 10 carbon atoms, with the exception of the tert-butyl group.

32. (Original) The block polymer according to claim 28, wherein the at least one monomer whose corresponding homopolymer has a Tg of less than or equal to 20°C is chosen from alkyl acrylates whose alkyl chain comprises from 1 to 10 carbon atoms, with the exception of the tert-butyl group.

33. (Original) The block polymer according to claim 16, wherein the at least one second block with a Tg of less than or equal to 20°C is present in an amount ranging from 5% to 75% by weight relative to the total weight of the block polymer.

34. (Original) The block polymer according to claim 33, wherein the at least one second block with a Tg of less than or equal to 20°C is present in an amount ranging from 15% to 50% by weight relative to the total weight of the block polymer.

35. (Original) The block polymer according to claim 33, wherein the at least one second block with a Tg of less than or equal to 20°C is present in an amount ranging from 25% to 45% by weight relative to the total weight of the block polymer.

36. (Withdrawn) A block polymer comprising at least one first block and at least one second block that are incompatible with each other, the at least one first block having a glass transition temperature (Tg) of between 20 and 40°C and the at least one second block having a glass transition temperature of less than or equal to 20°C or a glass transition temperature of greater than or equal to 40°C, the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block and the block polymer having a polydispersity index I of greater than 2.

37. (Withdrawn) The block polymer according to claim 36, wherein the at least one first block with a Tg of between 20 and 40°C is totally or partially derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of between 20 and 40°C.

38. (Withdrawn) The block polymer according to claim 36, wherein the at least one first block with a Tg of between 20 and 40°C is a copolymer derived from at least one monomer wherein the corresponding homopolymer has a Tg of greater than

or equal to 40°C, and from at least one monomer wherein the corresponding homopolymer has a Tg of less than or equal to 20°C.

39. (Withdrawn) The block polymer according to claim 36, wherein the at least one first block with a Tg of between 20 and 40°C is derived from at least one monomer chosen from methyl methacrylate, isobornyl acrylate, isobornyl methacrylate, butyl acrylate, and 2-ethylhexyl acrylate.

40. (Withdrawn) The block polymer according to claim 36, wherein the at least one first block with a Tg of between 20 and 40°C is present in an amount ranging from 10% to 85% by weight relative to the total weight of the block polymer.

41. (Withdrawn) The block polymer according to claim 40, wherein the at least one first block with a Tg of between 20 and 40°C is present in an amount ranging from 30% to 80% by weight relative to the total weight of the block polymer.

42. (Withdrawn) The block polymer according to claim 41, wherein the at least one first block with a Tg of between 20 and 40°C is present in an amount ranging from 50% to 70% by weight relative to the total weight of the block polymer.

43. (Withdrawn) The block polymer according to claim 36, wherein the at least one second block has a Tg of greater than or equal to 40°C and is totally or partially derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of greater than or equal to 40°C.

44. (Withdrawn) The block polymer according to claim 36, wherein the at least one second block has a Tg of greater than or equal to 40°C and is a homopolymer derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of greater than or equal to 40°C.

45. (Withdrawn) The block polymer according to claim 40, wherein the at least one monomer whose corresponding polymer has a Tg of greater than or equal to 40°C is chosen from:

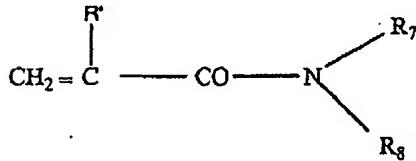
- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_1$

wherein  $\text{R}_1$  is chosen from linear and branched unsubstituted alkyl groups comprising from 1 to 4 carbon atoms, or  $\text{R}_1$  is chosen from a  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl group,

- acrylates of formula  $\text{CH}_2 = \text{CH-COOR}_2$

wherein  $\text{R}_2$  is a  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl group, and

- (meth)acrylamides of formula:



wherein  $\text{R}_7$  and  $\text{R}_8$ , which may be identical or different, each are chosen from a hydrogen atom and linear and branched alkyl groups comprising 1 to 12 carbon atoms; or  $\text{R}_7$  is H and  $\text{R}_8$  is a 1,1-dimethyl-3-oxobutyl group, and  $\text{R}'$  is chosen from H and methyl.

46. (Withdrawn) The block polymer according to claim 45, wherein the unsubstituted alkyl group comprising from 1 to 4 carbon atoms is chosen from methyl, ethyl, propyl, and isobutyl groups.

47. (Withdrawn) The block polymer according to claim 45, wherein the  $\text{C}_4$  to  $\text{C}_{12}$  cycloalkyl group is chosen from an isobornyl group and a tert-butyl group.

48. (Withdrawn) The block polymer according to claim 45, wherein the alkyl group comprising 1 to 12 carbon atoms is chosen from n-butyl, t-butyl, isopropyl, isoheptyl, isoctyl, and isononyl groups.

49. (Withdrawn) The block polymer according to claim 43, wherein the at least one monomer whose corresponding homopolymer has a Tg of greater than or equal to 40°C is chosen from methyl methacrylate, isobutyl methacrylate, and isobornyl (meth)acrylate.

50. (Withdrawn) The block polymer according to claim 36, wherein the at least one second block is present in an amount ranging from 10% to 85% by weight relative to the total weight of the block polymer.

51. (Withdrawn) The block polymer according to claim 50, wherein the at least one second block is present in an amount ranging from 20% to 70% by weight relative to the total weight of the block polymer.

52. (Withdrawn) The block polymer according to claim 51, wherein the at least one second block is present in an amount ranging from 30% to 70% by weight relative to the total weight of the block polymer.

53. (Withdrawn) The block polymer according to claim 36, wherein the at least one second block has a Tg of less than or equal to 20°C and is totally or partially derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of less than or equal to 20°C.

54. (Withdrawn) The block polymer according to claim 36, wherein the at least one second block has a Tg of less than or equal to 20°C and is a homopolymer

derived from at least one monomer wherein the homopolymer prepared from the at least one monomer has a Tg of less than or equal to 20°C.

55. (Withdrawn) The block polymer according to claim 53, wherein the at least one monomer whose corresponding homopolymer has a Tg of less than or equal to 20°C is chosen from:

- acrylates of formula  $\text{CH}_2 = \text{CHCOOR}_3$ ,

wherein  $R_3$  is chosen from linear and branched  $C_1$  to  $C_{12}$  unsubstituted alkyl groups, with the exception of the tert-butyl group, wherein at least one heteroatom chosen from O, N and S is optionally intercalated;

- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_4$ ,

wherein  $R_4$  is chosen from linear and branched  $C_6$  to  $C_{12}$  unsubstituted alkyl groups, wherein at least one heteroatom chosen from O, N and S is optionally intercalated;

- vinyl esters of formula  $R_5\text{-CO-O-CH} = \text{CH}_2$

wherein  $R_5$  is chosen from linear and branched  $C_4$  to  $C_{12}$  alkyl groups;

-  $C_4$  to  $C_{12}$  alcohol and vinyl alcohol ethers; and

-  $N$ -( $C_4$  to  $C_{12}$ )alkyl acrylamides.

56. (Withdrawn) The block polymer according to claim 55, wherein the  $N$ -( $C_4$  to  $C_{12}$ )alkyl acrylamide is N-octylacrylamide.

57. (Withdrawn) The block polymer according to claim 55, wherein the at least one monomer whose homopolymer has a Tg of less than or equal to 20°C is chosen from alkyl acrylates whose alkyl chain comprises from 1 to 10 carbon atoms, with the exception of the tert-butyl group.

58. (Withdrawn) The block polymer according to claim 53, wherein the at least one second block is present in an amount ranging from 20% to 90% by weight relative to the total weight of the block polymer.

59. (Withdrawn) The block polymer according to claim 58, wherein the at least one second block is present in an amount ranging from 30% to 80% by weight relative to the total weight of the block polymer.

60. (Withdrawn) The block polymer according to claim 59, wherein the at least one second block is present in an amount ranging from 50% to 70% by weight relative to the total weight of the block polymer.

61. (Withdrawn) The block polymer according to claim 1, wherein the at least one first block and/or the second block comprises at least one additional monomer.

62. (Withdrawn) The block polymer according to claim 61, wherein the at least one additional monomer is chosen from hydrophilic monomers and ethylenically unsaturated monomers comprising at least one silicon atoms.

63. (Withdrawn) The block polymer according to claim 61, wherein the at least one additional monomer is chosen from:

- ethylenically unsaturated monomers comprising at least one carboxylic or sulphonic acid function,

- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_6$

wherein  $\text{R}_6$  is chosen from linear and branched alkyl groups comprising from 1 to 4 carbon atoms, the alkyl group being substituted with at least one substituent chosen from hydroxyl groups and halogen atoms,

- methacrylates of formula  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{-COOR}_9$ ,

wherein R<sub>9</sub> is chosen from linear and branched C<sub>6</sub> to C<sub>12</sub> alkyl groups wherein at least one heteroatom chosen from O, N and S are optionally intercalated, the alkyl group being substituted with at least one substituent chosen from hydroxyl groups and halogen atoms;

- acrylates of formula CH<sub>2</sub> = CHCOOR<sub>10</sub>,

wherein R<sub>10</sub> is chosen from linear and branched C<sub>1</sub> to C<sub>12</sub> alkyl groups substituted with at least one substituent chosen from hydroxyl groups and halogen atoms, from (C<sub>1</sub>-C<sub>12</sub>)alkyl-O-POE (polyoxyethylene) with repetition of the oxyethylene unit from 5 to 30 times, and from a polyoxyethylenated group comprising from 5 to 30 ethylene oxide units, and

- ethylenically unsaturated monomers comprising at least one tertiary amine function.

64. (Withdrawn) The block polymer according to claim 63, wherein the alkyl group of R<sub>6</sub> comprising from 1 to 4 carbon atoms is chosen from methyl, ethyl, propyl, and isobutyl groups.

65. (Withdrawn) The block polymer according to claim 63, wherein R<sub>6</sub> is chosen from 2-hydroxypropyl methacrylate and 2-hydroxyethyl methacrylate.

66. (Withdrawn) The block polymer according to claim 63, wherein the alkyl group of at least one of R<sub>6</sub>, R<sub>9</sub>, and R<sub>10</sub> is substituted with halogen atoms chosen from chlorine, bromine, iodine, and fluorine.

67. (Withdrawn) The block polymer according to claim 63, wherein R<sub>6</sub> is chosen from trifluoroethyl methacrylate.

68. (Withdrawn) The block polymer according to claim 63, wherein R<sub>10</sub> is chosen from 2-hydroxypropyl acrylate and 2-hydroxyethyl acrylate.

69. (Withdrawn) The block polymer according to claim 63, wherein the (C<sub>1</sub>-C<sub>12</sub>)alkyl-O-POE of R<sub>10</sub> is methoxy-POE.

70. (Withdrawn) The block polymer according to claim 61, wherein the at least one additional monomer is chosen from acrylic acid, methacrylic acid and trifluoroethyl methacrylate.

71. (Withdrawn) The block polymer according to claim 61, wherein said at least one

additional monomer is present in an amount ranging from 1% to 30% by weight relative to the total weight of the at least one first and/or second blocks of the at least one block polymer.

72. (Original) The block polymer according to claim 1, wherein each of the at least one first and second blocks comprises at least one monomer chosen from acrylic acid, acrylic acid esters, methacrylic acid, and methacrylic acid esters.

73. (Original) The block polymer according to claim 1, wherein each of the at least one first and second blocks is totally derived from at least one monomer chosen from acrylic acid, acrylic acid esters, methacrylic acid, and methacrylic acid esters.

74. (Original) The block polymer according to claim 2, wherein the difference between the Tg of the at least one first and second blocks is greater than 10°C.

75. (Original) The block polymer according to claim 74, wherein the difference between the Tg of the at least one first and second blocks is greater than 20°C.

76. (Original) The block polymer according to claim 75, wherein the difference between the Tg of the at least one first and second blocks is greater than 30°C.

77. (Original) The block polymer according to claim 76, wherein the difference between the Tg of the at least one first and second blocks is greater than 40°C.

78. (Original) The block polymer according to claim 1, wherein the at least one intermediate segment has a Tg between the Tgs of the at least one first and second blocks.

79. (Original) The block polymer according to claim 1, wherein the block polymer has a polydispersity index of greater than or equal to 2.5.

80. (Original) The block polymer according to claim 79, wherein the block polymer has a polydispersity index of greater than or equal to 2.8.

81. (Original) The block polymer according to claim 80, wherein the block polymer has a polydispersity index ranging from 2.8 to 6.

82. (Original) The block polymer according to claim 1, wherein the block polymer has a weight-average mass (Mw) which is less than or equal to 300,000.

83. (Original) The block polymer according to claim 82, wherein the block polymer has a weight-average mass (Mw) which ranges from 35,000 to 200,000.

84. (Original) The block polymer according to claim 83, wherein the block polymer has a weight-average mass (Mw) which ranges from 45,000 to 150,000.

85. (Original) The block polymer according to claim 84, wherein the block polymer has a number-average mass (Mn) which ranges from 10,000 to 60,000.

86. (Original) The block polymer according to claim 85, wherein the block polymer has a number-average mass (Mn) which ranges from 12,000 to 50,000.

87. (Original) The block polymer according to claim 1, wherein the block polymer is not soluble to an active material content of at least 1% by weight in water or in a mixture of water and of linear or branched monoalcohols having from 2 to 5 carbon atoms, without pH modification, at room temperature (25°C).

88. (Original) The block polymer according to claim 1, wherein the block polymer is not an elastomer.

89. (Original) The block polymer according to claim 1, wherein the block polymer is a film-forming linear block ethylene polymer.

90. (Withdrawn) A process for preparing a block polymer comprising at least one first block and at least one second block that are incompatible with each other and that have different glass transition temperatures (Tg), wherein the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block, and wherein the block polymer has a polydispersity index I of greater than 2,

the process comprising:

- introducing a portion of polymerization solvent into a suitable reactor and heating until an adequate temperature for polymerization is reached,
- once the polymerization temperature is reached, introducing the constituent monomers of the first block in the presence of an polymerization initiator,
- after a time T corresponding to a maximum degree of conversion of 90%, introducing the constituent monomers of the second block and the rest of the polymerization solvent,

leaving the mixture to react for a time T', then cooling the mixture to room temperature to obtain the polymer dissolved in the polymerization solvent.

91. (Withdrawn) The process according to claim 90, wherein the polymerization temperature ranges from 60 to 120°C.

92. (Withdrawn) A cosmetic composition comprising at least one block polymer comprising at least one first block and at least one second block that are incompatible with each other and that have different glass transition temperatures (Tg), wherein the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block, and wherein the at least one block polymer has a polydispersity index I of greater than 2.

93. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition comprises from 0.1% to 60% by weight of polymer active material.

94. (Withdrawn) The cosmetic composition according to claim 93, wherein said composition comprises from 5% to 50% by weight of polymer active material.

95. (Withdrawn) The cosmetic composition according to claim 94, wherein said composition comprises from 10% to 40% by weight of polymer active material.

96. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition comprises a physiologically acceptable medium.

97. (Withdrawn) The cosmetic composition according to claim 96, wherein said physiologically acceptable medium comprises a hydrophilic medium comprising at least one of water and mixtures of water and at least one hydrophilic organic solvent.

98. (Withdrawn) The cosmetic composition according to claim 97, wherein said at least one hydrophilic organic solvent is chosen from alcohols.

99. (Withdrawn) The cosmetic composition according to claim 98, wherein said alcohols are chosen from linear or branched lower monoalcohols comprising from 2 to 5 carbon atoms, polyols, and polyethylene glycols.

100. (Withdrawn) The cosmetic composition according to claim 99, wherein said monoalcohols are chosen from ethanol, isopropanol and n-propanol.

101. (Withdrawn) The cosmetic composition according to claim 99, wherein said polyols are chosen from glycerol, diglycerol, propylene glycol, sorbitol and pentylene glycol.

102. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition further comprises a fatty phase comprising fatty substances that are liquid or solid at room temperature, and are of animal, plant, mineral or synthetic origin.

103. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition further comprises at least one cosmetically acceptable organic solvent.

104. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition further comprises at least one auxiliary film-forming agent chosen from plasticizers and coalescers.

105. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition further comprises at least one dyestuff chosen from water-soluble dyes and pulverulent dyestuffs.

106. (Withdrawn) The cosmetic composition according to claim 105, wherein said pulverulent dyestuffs are chosen from pigments, nacres and flakes.

107. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition further comprises at least one filler.

108. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition further comprises at least one ingredient chosen from vitamins, thickeners, trace elements, softeners, sequestering agents, fragrances, acidifying or basifying agents, preserving agents, sunscreens, surfactants, antioxidants, agents for preventing hair loss, antidandruff agents and propellants.

109. (Withdrawn) The cosmetic composition according to claim 92, wherein said composition is in the form of a suspension, a dispersion, a solution, a gel, an emulsion, a cream, a mousse, a dispersion of vesicles, a two-phase or multi-phase lotion, a spray, a powder, or a paste.

110. (Withdrawn) The cosmetic composition according to claim 109, wherein said emulsion is chosen from an oil-in-water (O/W) emulsion, a water-in-oil (W/O) emulsion and a multiple emulsion (W/O/W or polyol/O/W or O/W/O emulsion).

111. (Withdrawn) The cosmetic composition according to claim 109, wherein said dispersion of vesicles is chosen from dispersions of ionic and of nonionic lipids.

112. (Withdrawn) The cosmetic composition according to claim 109, wherein said paste is chosen from a soft paste and an anhydrous paste.

113. (Withdrawn) A makeup or care composition for keratin materials, said composition comprising at least one block polymer comprising at least one first block and at least one second block that are incompatible with each other and that have

different glass transition temperatures (Tg), wherein the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block, and wherein the at least one block polymer has a polydispersity index I of greater than 2.

114. (Withdrawn) A make-up or care composition according to claim 113, wherein said composition is chosen from a haircare product, a nail varnish, a lip makeup product, an eye makeup product, and a makeup product for the complexion.

115. (Withdrawn) A make-up or care composition according to claim 113, wherein the at least one block polymer comprises at least one first block having a glass transition temperature Tg ranging from 50 °C to 100 °C and at least one second block having a glass transition temperature Tg ranging from - 100 °C to 0 °C.

116. (Withdrawn) A make-up or care composition according to claim 113, wherein said at least one block polymer is chosen from:

(i) a block polymer comprising :

- a first block with a Tg of greater than or equal to 40°C which is an isobornyl acrylate/isobutyl methacrylate copolymer,
- a second block with a Tg of less than or equal to 20°C which is a 2-ethylhexyl acrylate homopolymer, and

- an intermediate segment, which is an isobornyl acrylate/isobutyl methacrylate/2-ethylhexyl acrylate random copolymer, and

(ii) a block polymer comprising :

- a first block with a Tg of greater than or equal to 40°C which is an isobornyl acrylate/isobutyl methacrylate copolymer,

- a second block with a Tg of less than or equal to 20°C, which is an isobutyl acrylate homopolymer, and

- an intermediate segment which is an isobornyl acrylate/isobutyl methacrylate/isobutyl acrylate random copolymer.

117. (Withdrawn) A make-up or care composition according to claim 116, wherein:

in said at least one block polymer (i):

- said first block has a Tg ranging from 0 °C to 20°C,

- said second block has a Tg ranging from -85°C to - 55°C, and

in said at least one block polymer (ii):

- said first block has a Tg ranging from 60°C to 90°C, and

- said second block has a Tg ranging from -35 to -5°C.

118. (Withdrawn) A cosmetic composition according to claim 92, wherein said composition further comprises at least one additional polymer chosen from film-forming polymers.

119. (Withdrawn) A cosmetic composition according to claim 92, wherein said composition further comprises at least one fatty substance which is solid at room temperature and which is chosen from waxes, pasty fatty substances and gums.

120. (Withdrawn) A cosmetic process for making up or caring for keratin materials, comprising applying to keratin materials a cosmetic composition comprising at least one block polymer comprising at least one first block and at least one second

block that are incompatible with each other and that have different glass transition temperatures (Tg), wherein the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block, and wherein the at least one block polymer has a polydispersity index I of greater than 2.

121. (Withdrawn) A process for improving the staying power of a cosmetic composition on keratin materials, comprising applying to keratin materials a cosmetic composition comprising at least one block polymer comprising at least one first block and at least one second block that are incompatible with each other and that have different glass transition temperatures (Tg), wherein the at least one first and second blocks are linked together via an intermediate segment comprising at least one constituent monomer of the at least one first block and at least one constituent monomer of the at least one second block, and wherein the at least one block polymer has a polydispersity index I of greater than 2.